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weight of at least one filler, the product is capable of being obtained by extrusion, wherein the at least one filler exhibits a specific surface greater than 300 m²/g and a mean diameter of a plurality of pores in the product is less than 0.5 μm.

4. (Amended) Composite product according to claim 1, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

B2
5. (Amended) Composite product according to claim 4, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene-α-olefin copolymers.

6. (Amended) Composite product according to claim 4 or 5, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

Sub C2
7. (Amended) Composite product according to claim 6, wherein the composite product is 10 to 40% by weight of the polyolefin material, 5 to 40% by weight of the polyether, and the remainder is the at least one filler.

8. (Amended) Composite product according to claim 1, wherein the filler is chosen from fillers with a high specific surface.

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subC2
9. (Amended) Composite product according to claim 8, wherein the at least one filler exhibits a specific surface of between 300 and 3000 m²/g.

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subC2
30. (Amended) Porous composite product with a homogeneous structure, the product being formed of a polymeric material, the product exhibiting a high specific surface and comprising between 30% and 85% by weight of at least one filler and the product being capable of being obtained by extrusion, wherein the at least one filler exhibits a specific surface greater than 300 m²/g and a mean diameter of a plurality of pores in the product is less than 0.5 μm.

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33. (Amended) Composite product according to claim 30, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

B4
34. (Amended) Composite product according to claim 33, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

35. (Amended) Composite product according to claim 30, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

36. (Amended) Composite product according to claim 33, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- α -olefin copolymers.

37. (Amended) Composite product according to claim 33, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

38. (Amended) Composite product according to either of claims 33, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

39. (Amended) Composite product according to claim 38, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

40. (Amended) Composite product according to claim 38, wherein the composite product is 10 to 40% by weight of the polyolefin, 5 to 40% by weight of the polyether, and the remainder is the at least one filler.

41. (Amended) Composite product according to claim 30, wherein the at least one filler is chosen from fillers with a high specific surface.

42. (Amended) Composite product according to claim 41, wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

43. (Amended) Composite product according to claim 41, wherein the at least one filler exhibits a specific surface of between 300 and 3000 m²/g.

44. (Amended) Composite product according to claim 30, wherein the product includes 50 to 85% by weight of the at least one filler.

45. (Amended) Composite product according to claim 30, wherein the product exhibits a "BET" specific surface of greater than 10 m²/g.

46. (Amended) Composite product according to claim 45, wherein the product exhibits a "BET" specific surface of greater than 20 m²/g.

47. (Amended) Composite product according to claim 30, wherein the product is provided in the form of a film.

48. (Amended) Composite product according to claim 47, wherein the product in the form of a film exhibits a tensile strength at break of greater than 4 MPa.

49. (Amended) Composite product according to claim 48, wherein the product exhibits a tensile strength at break of greater than 6 MPa.

50. (Amended) Composite product according to claim 30, wherein the product is provided in the form of granules.

51. (Amended) Porous composite product with a homogeneous structure, the product being formed of a polymeric material and at least 20% by weight of at least one filler, the product being capable of being obtained by extrusion and exhibiting a high specific surface, its "BET" specific surface being greater than 10 m²/g, wherein the at least one filler exhibits a specific surface greater than 300 m²/g and the mean diameter of a plurality of pores in the product is less than 0.5 μm.

53. (Amended) Composite product according to claim 51, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

54. (Amended) Composite product according to claim 53, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

55. (Amended) Composite product according to claim 51, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

56. (Amended) Composite product according to claim 53, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- α -olefin copolymers.

57. (Amended) Composite product according to claim 53, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

58. (Amended) Composite product according to claim 53, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

59. (Amended) Composite product according to claim 58, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

60. (Amended) Composite product according to claim 58, wherein the composite product is 10 to 40% by weight of the polyolefin, 5 to 40% by weight of the polyether, and the remainder is the at least one filler.

61. (Amended) Composite product according to claim 51, wherein the at least one filler is chosen from fillers with a high specific surface.

62. (Amended) Composite product according to claim 61, wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

63. (Amended) Composite product according to claim 61, wherein the at least one filler exhibits a specific surface of between 300 and 3000 m²/g.

64. (Amended) Composite product according to claim 51, wherein the product is between 30% and 85% by weight of the at least one filler.

65. (Amended) Composite product according to claim 64, wherein the product is 50 to 85% by weight of the at least one filler.

66. (Amended) Composite product according to claim 51, wherein the product exhibits a "BET" specific surface of greater than 20 m²/g.

67. (Amended) Composite product according to claim 51, wherein the product is provided in the form of a film.

68. (Amended) Composite product according to claim 67, wherein the product in the form of a film exhibits a tensile strength at break of greater than 4 MPa.

69. (Amended) Composite product according to claim 68, wherein the product exhibits a tensile strength at break of greater than 6 MPa.

70. (Amended) Composite product according to claim 51, the product is provided in the form of granules.

71. (Amended) Porous composite product with a homogeneous structure, the product exhibiting a high specific surface and being formed of a polymeric material and at least 20% by weight of at least one filler, the product being capable of being obtained by extrusion and being provided in the form of a film, wherein the at least one filler exhibits a specific surface greater than 300 m²/g and a mean diameter of a plurality of pores in the product is less than 0.5 μm.

74. (Amended) Composite product according to claim 71, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, which are optionally fluorinated, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

75. (Amended) Composite product according to claim 74, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

76. (Amended) Composite product according to claim 71, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

77. (Amended) Composite product according to claim 74, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- α -olefin copolymers.

78. (Amended) Composite product according to claim 74, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

79. (Amended) Composite product according to claim 74, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

80. (Amended) Composite product according to claim 79, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

81. (Amended) Composite product according to claim 79, wherein the composite product is 10 to 40% by weight of the polyolefin, 5 to 40% by weight of the polyether, and the remainder is the at least one filler.

82. (Amended) Composite product according to claim 71, wherein the at least one filler is chosen from fillers with a high specific surface.

83. (Amended) Composite product according to claim 82, wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

84. (Amended) Composite product according to claim 82, wherein the at least one filler exhibits a specific surface of between 300 and 3000 m²/g.

85. (Amended) Composite product according to claim 71, wherein the product is between 30% and 85% by weight of the at least one filler.

86. (Amended) Composite product according to claim 85, wherein the product is 50 to 85% by weight of the at least one filler.

87. (Amended) Composite product according to claim 71, wherein the product exhibits a "BET" specific surface of greater than 10 m²/g.

88. (Amended) Composite product according to claim 87, wherein the product exhibits a "BET" specific surface of greater than 20 m²/g.

89. (Amended) Composite product according to claim 71, wherein the product is provided in the form of a film.

90. (Amended) Composite product according to claim 89, wherein the product in the form of a film exhibits a tensile strength at break of greater than 4 MPa.

91. (Amended) Composite product according to claim 90, wherein the product exhibits a tensile strength at break of greater than 6 MPa.

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92. (Amended) Porous composite product with a homogeneous structure, the product exhibiting a high specific surface and being formed of a polymeric material and at least 20% by weight of at least one filler, the product being capable of being obtained by extrusion and being provided in the form of a granules, wherein the at least one filler exhibits a specific surface greater than 300 m²/g and a mean diameter of a plurality of pores in the product is less than 0.5 μm.

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95. (Amended) Composite product according to claim 92, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyolefins, acrylic polymers, aromatic polymers, polyamides, polyimides, vinyl polymers with a high proportion of ethyl monomers.

96. (Amended) Composite product according to claim 95, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

97. (Amended) Composite product according to claim 92, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

98. (Amended) Composite product according to claim 95, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of polyethylenes, polypropylenes, ethylene- α -olefin copolymers.

99. (Amended) Composite product according to claim 95, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.

100. (Amended) Composite product according to claim 95, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are chosen from polyethers, poly(vinyl alcohol)s or ethylene-vinyl alcohol copolymers.

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101. (Amended) Composite product according to claim 100, wherein the thermoplastic elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process are polyethers with a molecular mass of between 200,000 and 1,000,000.

102. (Amended) Composite product according to claim 100, wherein the composite product is 10 to 40% by weight of the polyolefin, 5 to 40% by weight of the polyether, and the remainder is the at least one filler.

103. (Amended) Composite product according to claim 92, wherein the at least one filler is chosen from fillers with a high specific surface.

104. (Amended) Composite product according to claim 103, wherein the at least one filler is chosen from fillers composed of active charcoal, inorganic particles or metallic particles.

105. (Amended) Composite product according to claim 103, wherein the at least one filler exhibits a specific surface of between 300 and 3000 m²/g.

106. (Amended) Composite product according to claim 92, wherein the product is between 30% and 85% by weight of the at least one filler.

107. (Amended) Composite product according to claim 106, wherein the product is 50 to 85% by weight of the at least one filler.

108. (Amended) Composite product according to claim 92, wherein the product exhibits a "BET" specific surface of greater than 10 m²/g.

109. (Amended) Composite product according to claim 108, wherein the product exhibits a "BET" specific surface of greater than 20 m²/g.

110. (Amended) Composite product according to claim 92, wherein the product is provided in the form of a film.

111. (Amended) Composite product according to claim 4, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of fluorinated polyolefins.

112. (Amended) Composite product according to claim 1, wherein the polymeric material comprises elastomers or polymers chosen from the group consisting of thermoplastic polymers or elastomers, soluble in polar organic solvents or water, which remain after the implementation of the manufacturing process.